Mental Healthcare Report

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CeMHOR Arkansas
Center for Mental Healthcare & Outcomes Research
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Theme:
DIVERSE VETERAN POPULATIONS
Challenges & Opportunities

www.va.gov/hsrd2003

CENTRAL ARKANSAS VETERANS HEALTHCARE SYSTEM

Jeffrey Pyne, MD, Advanced Research Career Development Awardee, holds a "feeling" thermometer rating scale used to assign value to outcomes.

Goal: A "real-time" system to improve treatment outcomes for schizophrenia

Measuring outcomes of treatment for schizophrenia is not new; a variety of measuring tools is available. What **is** new? Using real-time outcomes measures to improve actual treatment outcomes for this chronic, debilitating mental illness.

With a new three-year VA Advanced Research Career Development Award, Jeffrey Pyne, MD, plans to concentrate on this new field, developing a real-time outcomes feedback system.

The recent award and VA HSR&D funding will propel the Arkansas investigator into the forefront nationally and internationally on use of outcomes data to inform clinical decision-making, according to Richard R. Owen, MD, Dr. Pyne's mentor.

"Jeff already is recognized internationally for his work on effectiveness measures and cost-effectiveness of mental health interventions," said Dr. Owen, CeMHOR Director and Research Coordinator of Mental Health QUERI. "His new area of research is incredibly important for the VA."

Greer Sullivan, MD, Director of the South Central Mental Illness Research, Education and Clinical Center, has been Dr. Pyne's primary mentor for the past three years and will continue as a secondary mentor for his advanced award.

Building on his Research Career Development Award studies over three years, Dr. Pyne intends to develop and pilot-test a "real-time" outcomes feedback system for schizophrenia, with the help of veterans, VA providers and VA administrators.

The result will be a system to help providers monitor and manage the illness's progression and the response to treatment.

Dr. Pyne's earlier research showed that a generic outcomes measure, the Quality of Well Being scale, could detect improvement in schizophrenia symptoms. This was significant, he said, because "using generic measures, as opposed to disease-specific measures, puts everyone on the same playing field. It means we are all basically using the same yardstick to measure outcomes of treatment, regardless of the illness."

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FY2000 statistics on schizophrenia and veterans

- 102,295: number of veterans diagnosed with schizophrenia (53% of those diagnosed with psychosis)
- $15,809: average annual cost per patient with schizophrenia
- $1,520: mean annual pharmacy cost per patient with schizophrenia
- $1.8 billion: total VA healthcare monies spent on veterans with schizophrenia
- 2.2%: amount by which the number of veterans with schizophrenia declined from FY99
- 70.3%: percent of patients receiving antipsychotic medication who had some exposure to an atypical agent during the year
- 2.7%: percent of veterans with schizophrenia who were prescribed clozapine, despite its effectiveness in treating patients with refractory schizophrenia, and given that 20-25% of patients with the illness are refractory to treatment with other agents
- 40%: percent of patients with schizophrenia who received less than 80% of the amount of antipsychotic medications they should have received in order to take as prescribed
- 12%: percent who were prescribed two antipsychotics concurrently even though little research shows efficacy of this approach

—from *2nd Annual National Psychosis Registry Report, SMITREC*

Sample vignettes

1 **Without** real-time outcome measures: Patient A, with a diagnosis of schizophrenia, presents to your clinic for a scheduled follow-up visit. He reports his symptoms are a little worse, and side effects to medications are about the same. He also reports he is taking his medication regularly and denies alcohol or street-drug use. Given this information, how likely are you to modify the patient's current or future treatment plan (please circle one number).

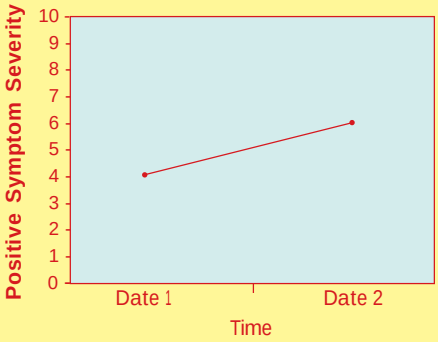
Extremely Unlikely 0 1 2 3 4 5 6 7 8 9 10 Extremely Likely

If you are thinking of modifying this patient's current or future treatment plan, what types of treatment modifications are you thinking of?

2 **With** real-time outcomes feedback system in place: Same information as No. 1 but with outcomes feedback information (below) available at the start of your appointment with the patient.

Specific Positive Symptom Change Since Last Visit

Auditory hallucinations	increase
Visual hallucinations	no change
Tactile hallucinations	no change
Olfactory hallucinations	no change
Delusions	increase
Thought disorganization	decrease
Paranoid ideation	no change



Given this information, how likely are you to modify the patient's current or future treatment plan (please circle one number). [Scale is the same as in No. 1].

If you are thinking of modifying this patient's current or future treatment plan, what types of treatment modifications are you thinking of?

Real-time outcomes

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Now that generic measures have proven sensitive to changes in schizophrenia symptom severity, Dr. Pyne explained, researchers have a common ruler with which to compare measurements of the effectiveness of treatment for schizophrenia with those for other chronic illnesses.

"We will be able to see how interventions for schizophrenia do up against those for other diseases. Are they as effective? Are they as cost-effective? It's important to be able to make these comparisons because many people think that mental illnesses are so different that they can't be compared with treatment outcomes for other chronic conditions. The fact is: Mental illness affects people the same way other chronic illnesses do."

Talking about his upcoming research, Dr. Pyne said, "Only recently have we begun to learn which approaches to outcomes feedback work best, and which don't, in improving the treatment process and outcomes for chronic diseases. Schizophrenia is a prototype chronic disease. Treatment may help the symptoms, but it doesn't cure the disease."

When he describes a "real-time" outcomes feedback system, Dr. Pyne said it is the opposite of a "delayed-time" system in which outcomes information may be stale—weeks or months old—by the time a patient is seen again for treatment. While that kind of information may be useful for annual outcomes reports, it is generally not useful in determining treatment.

"The goal is for a provider to see the patient and have access right then to up-to-date, clinically relevant information on the patient's symptoms and treatment response. The outcomes feedback system would be a standardized tool to help clinicians make decisions, similar to the way a doctor uses blood pressure readings to influence antihypertensive treatment."

A real-time outcomes feedback system, Dr. Pyne elaborated, could be similar to that used for blood tests. "Prior to a patient's appointment in a VA clinic, he or she goes to an 'outcomes lab' where a clinic staff member conducts a brief, standardized interview and enters the data, or lab results, into the patient's electronic medical record.

"When the patient sees the clinician at the appointment, that lab information is readily available, and fresh. And it's available, thanks to the VA's Computerized Patient Record System, to multiple providers of mental health services: psychiatrists, psychologists, advanced practice nurses, social workers, clinical pharmacists and case managers."

To get the input of various "end-user" groups, Dr. Pyne will use two VA clinic sites, North Little Rock and San Diego, for focus groups, surveys and clinical vignette rankings. He envisions three to four groups of six to 10 providers at each site.

Provider groups will include both medication prescribers and nonprescribers. VISN 16 Mental Health Product Line Advisory Council members will comprise the administrator group.

"From these groups, we hope to determine the preferred content, source, recipient and format for real-time outcomes data, all of which are important based on what we know from work with other chronic illnesses," Dr. Pyne said.

Information from the focus groups and surveys will help him write versions of clinical vignettes (see box above) *with* and *without* real-time outcomes feedback. Providers will be asked whether information in each vignette would cause them to make changes in the patient's treatment plan.

"It doesn't do any good if we provide information and it's not what people treating the patient want or need, or if it doesn't influence treatment," Dr. Pyne said. "A system is most helpful if the information it supplies can be used to adjust treatment now or perhaps on down the road."

Pilot-testing of the system over a six-month period will involve about 50 veterans with schizophrenia.

After pilot-testing and refining the outcomes feedback system, Dr. Pyne said he will write and submit a proposal for the VA to test, on a wider scale, implementation of the system and compare its effectiveness and cost-effectiveness to usual care.

He also plans to pursue additional training and courses focusing on survey design, collecting and analyzing data, developing clinical vignettes, and other topics. 4

Catching up with:
Rick Owen

What was it like to grow up and go to college and medical school in Minnesota, land of sky blue waters?

It was wonderful, and it was terrible. I am obviously referring to Minnesota's two seasons: spring-summer-fall, which flies by, and winter. I think this alternating ecstasy and agony helped prepare me for a career in academic medicine. My childhood and schooling in Minnesota taught me about the virtues of hard work, patience, tolerance, and auto maintenance.

You make it sound like Minnesota winters were awful. What did you do for fun?

My favorite winter sport was cross-country skiing. Two years ago, I traveled to northern Minnesota and tried my hand at dogsledding. It was a great trip: I slept under the stars on a frozen lake one night. It was about 10 degrees below zero. I also did the "Finnish sauna" thing–getting all hot and then jumping through a hole in the ice. That was a lot of fun. Really.

How can Minnesota claim to have more shoreline than California, Florida and Hawaii combined?

The state is called the "Land of 10,000 Lakes," although my understanding is that the true number may be closer to 11,000. This claim about the amount of shoreline is supposedly true, although it does sound like a stretch.

You graduated from college summa cum laude with distinction in chemistry. Did your parents let you have a chemistry set?

Richard R. Owen, MD, practices for a gig.

No, but I remember having a "rock computer," a toy version of one of those early computers with punch cards–I could determine various characteristics of a rock, "enter" these in the computer, and it would spit out a card identifying my rock. This quickly became boring because it seemed all the rocks I tested were granite.

Your CV indicates your first scientific publication resulted from work done during medical school. What did you do?

I had a remarkable opportunity to work in the laboratory of Timothy Crow, a British psychiatrist who has performed pioneering schizophrenia research. I worked with a biochemist, Frank Owen (no relation), to study dopamine receptor density in the substantia nigra in schizophrenia.

What enticed you to leave your home state after medical school?

For one, I wanted a change of scenery–to live in a new city. But the main consideration was my search for a residency program combining a strong emphasis on biological psychiatry research with good education about psychotherapy. I found such a program at McLean Hospital in Belmont, Massachusetts, which is affiliated with Harvard Medical School. I enjoyed my residency there and also sight-seeing in the Boston area.

Tell us about your research as a fellow at the National Institute of Mental Health.

I was fortunate to join Dave Pickar's research program in the Clinical Neuroscience Branch, where a study of clinical and biological effects of the novel antipsychotic drug clozapine had just begun. A major project of mine was a study of the effects of a serotonin receptor agonist, m-chlorophenylpiperazine, in study subjects with schizophrenia. My work suggested that clozapine's antagonism at serotonin receptors is partly responsible for its therapeutic effect.

What was it about Arkansas and the VA that attracted you to Little Rock?

I was initially attracted by mild winters and by a strong basic and clinical research program in schizophrenia at the Little Rock VAMC and the University of Arkansas for Medical Sciences (UAMS). I really liked the people I met during my interviews. One attraction that wasn't on my radar screen at the time was the strong health services research group, led by G. Richard Smith, MD. My mentor in schizophrenia research, Craig Karson, MD, suggested that I collaborate with investigators in what was then known as the Field Program for Mental Health. Soon, I was working closely with Ellen Fischer, PhD, on the field test of the Schizophrenia Outcomes Module. All of the Little Rock health services investigators were very helpful to my career development–it was like doing a second fellowship.

What do you enjoy most about your jobs as Director of CeMHOR and Research Coordinator for the Mental Health QUERI?

The people with whom I have the pleasure of working. I am referring not only to the people at CeMHOR, UAMS and the Central Arkansas Veterans Healthcare System, but also to investigators and staff in the South Central MIRECC, the great people serving on the Mental Health QUERI Executive Committee, and other health services researchers across the country.

When you get away from psychiatry and research, what do you do to relax and have fun?

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CeMHOR PEOPLE: New faces in Building 58

- **Mark Edlund, MD, PhD,** was on a Psychiatry Research Fellowship until June with the UCLA Neuropsychiatric Institute, where he previously had completed a four-year residency. As a researcher for the South Central Mental Illness Research, Education and Clinical Center (MIRECC), he hopes to apply for a Career Development Research Award from the VA to study adherence to mental health treatment in primary care settings. He also will continue research started at UCLA that focuses on access to mental health treatment and quality of care. He graduated from the University of Michigan Medical School and also holds a PhD in health services organization and policy and an MA in economics from Michigan. This year he received the 21st Century Prize awarded for the best psychiatry resident paper at UCLA.

- **Snigdha Mukherjee, PhD,** comes from the University of Alabama at Birmingham, where she was assistant professor in the Department of Health Behavior, School of Public Health, and also was associated with the Center for Health Promotion, the Center for Aids Research and the John J. Sparkman Center for International Public Health Education. An evaluator for MIRECC and the Mental Health Quality Enhancement Research Initiative, she plans to pursue research into factors, such as the stigma attached to mental illness, that affect health care utilization, as well as conceptualization, scale development and measurement. She holds a PhD and MA in sociology from the University of Akron and bachelor's and master's degrees in education and English literature from the University of Delhi in India.

- **Diane Steffick, PhD,** earned a doctorate in economics in July from the University of Michigan, where her dissertation focused on mental health and individuals' labor supply across the life cycle. She also holds an MA in economics from Michigan. At CeMHOR she will consult on grant projects that involve cost-effectiveness and cost-benefit research. She has done research with several entities, including the Survey Research Center of the Institute for Social Research at Michigan and the Urban Institute's Income and Benefits Policy Center in Washington, DC. She was a National Institute on Aging pre-doctoral training fellow in Michigan's Population Studies Center.

- **Patti Bokony, PhD,** will continue her association with Arkansas CARES (Center for Addictions Research, Education and Services) during her fellowship, while analyzing data collected on mothers and children served through the University of Arkansas for Medical Sciences center. Her areas of interest are mental health services for children at risk, particularly children of mothers with addiction, and Head Start program evaluation and mental health screening. Her PhD in educational psychology and research is from the University of Memphis.

- **Dean Blevins, PhD,** completed his doctoral work in August at the University of Akron, where his dissertation focused on development and training of hospice nurse expertise. At CeMHOR he will work with the dementia group and hopes to pursue research into contemporary end-of-life issues. In Ohio he was part of a working research group to improve psychosocial care near the end of life. He has taught university psychology courses and helped plan a 2002 international conference at Cleveland on "Attending to Psychosocial Issues Near the End of Life."

- **Sarah Story** started work in August with MIRECC as administrative assistant for Drs. Edlund, Mukherjee and Steffick. She previously worked 11 years for a Conway, AR, refrigeration company. Ms. Story and her husband, who live in Houston, AR, have two daughters and five grandchildren. 4

Catching up with: Rick Owen

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My hobbies include reading, tennis, and music. I think that my musical exploits are the most fun.

You've been spotted performing in local coffeehouses and we hear you write music. Have you always been a musician? Did you have a rock group that practiced in your parents' garage when you were a teenager?

I grew up taking piano and trumpet lessons. My sister got a classical guitar when I was about 10 or 11 and was nice enough to let me start learning how to play. I didn't start performing on guitar and writing songs regularly until after I moved to Little Rock. Interestingly, my co-workers encouraged me to perform more, and I have done several "gigs" at work retreats or meetings. I have written new lyrics to several well known songs that refer to my work and my colleagues. My favorite one starts: "Come gather 'round people on your speakerphones..." I never played in a rock band as a teenager, but I now perform in a folk quartet, "Stay Tuned."

How did you Stay Tuned musicians meet and get together?

We met at a monthly informal folk singing meeting at our church more than four years ago. Soon after that, we started singing regularly at church services, and did an occasional gig either at the church or elsewhere. Our most unusual gig was a performance at 8 a.m. one Monday in the cafeteria of a local psychiatric hospital as part of their 15th anniversary celebration. For the past two years, we have performed every two or three months at a local coffeehouse.

We spot you periodically in a local bookstore; what kind of books do you like to read?

One reason I go to that bookstore is because it has a great selection of music CDs. My favorite reading material is fiction, including humorous novels, mysteries and science fiction/fantasy novels. My favorite literary work is *Lord of the Rings.*

So, you play in a band, write songs, read a lot, reportedly have a photographic memory, and your peers chose you one of the best doctors (psychiatrists) in the state for 2002. Are you a "Renaissance man"?

I would hope that I'm more modern than that. Seriously, I have been blessed with a wonderful family, many great friends and co-workers, and a few talents. There are still some things I would like to do better, like become a better guitarist and songwriter and further develop my leadership skills. I remind myself that while hard work and success are important, joy is essential. So I try to enjoy all aspects of my life, including my work. 4